Table of Contents Acronyms and Abbreviations

CABRILLO PORT LIQUEFIED NATURAL GAS DEEPWATER PORT REVISED DRAFT EIR TABLE OF CONTENTS

NOTE: The CD located in the front pocket of Volume I contains the entire Revised Draft EIR, including appendices that are not in the printed document.

<u>Section</u>			<u>Page</u>
VOLUM	ΕI		
EXECU1	IVE S	UMMARY	ES-1
	1.0	INTRODUCTION	ES-1
	2.0	SUMMARY DESCRIPTION OF THE PROPOSED PROJECT	ES-5
	3.0	PROJECT ALTERNATIVES	
	4.0	ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES	_
	4.1	OCEANOGRAPHY AND METEOROLOGY	
	4.2	PUBLIC SAFETY	
	4.3	MARINE TRAFFIC	— — — — —
	4.4	AESTHETICS	ES-26
	4.5	AGRICULTURE AND SOIL RESOURCES	
	4.6	AIR QUALITY	ES-27
	4.7	BIOLOGICAL RESOURCES - MARINE	
	4.8	BIOLOGICAL RESOURCES – TERRESTRIAL	
	4.9	CULTURAL RESOURCES	
	4.10	ENERGY AND MINERAL RESOURCES	
	4.11	GEOLOGIC HAZARDS	
	4.12	HAZARDOUS MATERIALS	
	4.13	LAND USENOISE AND VIBRATION	
	4.14		
	4.15 4.16	RECREATIONSOCIOECONOMICS	
	4.16 4.17	TRANSPORTATION	
	4.17 4.18	WATER QUALITY AND SEDIMENTS	
	4.10 4.19	ENVIRONMENTAL JUSTICE	
	4.19	CUMULATIVE ANALYSIS	
	4.20 5.0	OTHER NEPA/CEQA CONSIDERATIONS	
	6.0	CONCLUSION	
	0.0	CONCLUSION	LO-43
1.0	INTR	ODUCTION	1-1
	1.1	BACKGROUND INFORMATION	
		1.1.1 The Deepwater Port Act	
		1.1.2 The Governor of California's Role in DWP Licensing	
		1.1.3 U.S. Environmental Protection Agency	
		1.1.4 The California State Lands Commission	

		1.1.5 NEPA and CEQA Requirements for DWPA Licenses and CSLC Leases	1-6
	1.2	PROJECT PURPOSE, NEED, AND OBJECTIVES	
		1.2.1 Federal and State Responsibilities	
		1.2.2 Natural Gas Need in the United States	
		1.2.3 Natural Gas Need in California	
		1.2.4 Increasing Dependence on Foreign Sources for the Supply of	
		Natural Gas	
		1.2.5 Applicant's Purpose and Objectives	1-13
	1.3	PURPOSE AND SCOPE OF THE EIS/EIR	1_14
	1.0	1.3.1 The U.S. Coast Guard and MARAD	
		1.3.2 The California State Lands Commission	
		1.3.3 Memorandum of Agreement between USCG, MARAD, and	1-10
		CSLC	1 17
	1.4	CEQA RECIRCULATION	
	1.4	1.4.1 Reason for Recirculation	
			1-10
		-,	4 40
	4 5	October 2004 Draft EIS/EIR	
	1.5	PUBLIC REVIEW AND COMMENT OPPORTUNITIES	
		1.5.1 Scoping Activities	
		1.5.2 Scoping Comments	1-29
		1.5.3 Notification and Public Communication about the October	
		2004 Draft EIS/EIR	
		1.5.4 Public Review of the Revised Draft EIR	
	1.6	PERMITS, APPROVALS, AND REGULATORY REQUIREMENTS	1-34
	1.7	CONTENTS OF THE REVISED DRAFT EIR	
	1.8	REFERENCES	1-36
2.0	DES	CRIPTION OF THE PROPOSED ACTION	2-1
	2.1	PROJECT OVERVIEW AND LOCATION	2-2
	2.2	FSRU AND VICINITY	2-14
		2.2.1 Properties of Natural Gas to be Imported to the Project	2-14
		2.2.2 Floating Storage and Regasification Unit	
		2.2.3 Mooring and LNG Transfer	
		3	
	2.3	2.2.4 Safety Zone and Area to be Avoided	2-38
	2.3	2.2.4 Safety Zone and Area to be Avoided OFFSHORE PIPELINES AND SHORE CROSSING	2-38
	2.3	2.2.4 Safety Zone and Area to be Avoided OFFSHORE PIPELINES AND SHORE CROSSING 2.3.1 Offshore Pipelines and Associated Facilities	2-38 2-39 2-39
		2.2.4 Safety Zone and Area to be Avoided	2-38 2-39 2-39
	2.3	2.2.4 Safety Zone and Area to be Avoided	2-38 2-39 2-42 2-42
		2.2.4 Safety Zone and Area to be Avoided OFFSHORE PIPELINES AND SHORE CROSSING 2.3.1 Offshore Pipelines and Associated Facilities. 2.3.2 Shore Crossing. ONSHORE PIPELINES AND FACILITIES 2.4.1 Center Road Pipeline and Facilities.	2-38 2-39 2-42 2-42 2-43
		2.2.4 Safety Zone and Area to be Avoided OFFSHORE PIPELINES AND SHORE CROSSING 2.3.1 Offshore Pipelines and Associated Facilities. 2.3.2 Shore Crossing	2-38 2-39 2-42 2-42 2-43 2-50
	2.4	2.2.4 Safety Zone and Area to be Avoided OFFSHORE PIPELINES AND SHORE CROSSING 2.3.1 Offshore Pipelines and Associated Facilities 2.3.2 Shore Crossing ONSHORE PIPELINES AND FACILITIES 2.4.1 Center Road Pipeline and Facilities 2.4.2 Line 225 Pipeline Loop and Facilities 2.4.3 Maintenance of Onshore Pipelines and Facilities	2-38 2-39 2-42 2-42 2-43 2-50
		2.2.4 Safety Zone and Area to be Avoided OFFSHORE PIPELINES AND SHORE CROSSING 2.3.1 Offshore Pipelines and Associated Facilities. 2.3.2 Shore Crossing	2-38 2-39 2-42 2-42 2-43 2-50 2-51
	2.4	2.2.4 Safety Zone and Area to be Avoided OFFSHORE PIPELINES AND SHORE CROSSING 2.3.1 Offshore Pipelines and Associated Facilities 2.3.2 Shore Crossing	2-382-392-422-422-502-512-52
	2.4	2.2.4 Safety Zone and Area to be Avoided OFFSHORE PIPELINES AND SHORE CROSSING 2.3.1 Offshore Pipelines and Associated Facilities	2-382-392-422-422-502-512-52
	2.4	2.2.4 Safety Zone and Area to be Avoided OFFSHORE PIPELINES AND SHORE CROSSING 2.3.1 Offshore Pipelines and Associated Facilities	2-382-392-422-432-502-512-532-53
	2.4	2.2.4 Safety Zone and Area to be Avoided OFFSHORE PIPELINES AND SHORE CROSSING 2.3.1 Offshore Pipelines and Associated Facilities. 2.3.2 Shore Crossing	2-382-392-422-432-502-512-532-53
	2.4	2.2.4 Safety Zone and Area to be Avoided OFFSHORE PIPELINES AND SHORE CROSSING 2.3.1 Offshore Pipelines and Associated Facilities. 2.3.2 Shore Crossing ONSHORE PIPELINES AND FACILITIES 2.4.1 Center Road Pipeline and Facilities 2.4.2 Line 225 Pipeline Loop and Facilities 2.4.3 Maintenance of Onshore Pipelines and Facilities CONSTRUCTION AND INSTALLATION: FSRU AND VICINITY 2.5.1 Floating Storage and Regasification Unit 2.5.2 Mooring System CONSTRUCTION AND INSTALLATION: OFFSHORE PIPELINES AND SHORE CROSSING 2.6.1 Shore Crossing via HDB	2-382-392-422-422-502-512-532-54
	2.42.52.6	2.2.4 Safety Zone and Area to be Avoided OFFSHORE PIPELINES AND SHORE CROSSING 2.3.1 Offshore Pipelines and Associated Facilities	2-382-392-422-422-502-512-532-54
	2.4	2.2.4 Safety Zone and Area to be Avoided OFFSHORE PIPELINES AND SHORE CROSSING 2.3.1 Offshore Pipelines and Associated Facilities. 2.3.2 Shore Crossing ONSHORE PIPELINES AND FACILITIES 2.4.1 Center Road Pipeline and Facilities 2.4.2 Line 225 Pipeline Loop and Facilities 2.4.3 Maintenance of Onshore Pipelines and Facilities CONSTRUCTION AND INSTALLATION: FSRU AND VICINITY 2.5.1 Floating Storage and Regasification Unit 2.5.2 Mooring System CONSTRUCTION AND INSTALLATION: OFFSHORE PIPELINES AND SHORE CROSSING 2.6.1 Shore Crossing via HDB	2-382-392-422-432-502-532-532-542-54

		2.7.1 Onshore Pipeline Construction Sequence	
		2.7.2 Crossing Techniques	2-77
		2.7.3 Off-Right-of-Way Activities	2-80
	2.8	FUTURE PLANS, DECOMMISSIONING, AND ABANDONMENT	2-81
		2.8.1 Floating Storage and Regasification Unit and Mooring	
		System	2-81
		2.8.2 Offshore Pipelines	
		2.8.3 Shore Crossing and Onshore Pipelines and Facilities	
	2.9	REFERENCES	
3.0	ALTI	ERNATIVES	3-1
	3.1	SELECTION OF ALTERNATIVES	3-1
	3.2	IDENTIFICATION OF A REASONABLE RANGE OF ALTERNATIVE	
	3.3	ALTERNATIVES ELIMINATED FROM FURTHER ANALYSIS	
		3.3.1 Energy Conservation	
		3.3.2 Renewable Energy Sources	
		3.3.3 Retrofitting Existing Power Plants	
		3.3.4 New or Expanded Pipeline Systems	
		3.3.5 Northern Baja Mexico LNG Terminals	
		3.3.6 Regional Offshore Alternatives	
		3.3.7 Specific California Locations	
		3.3.8 Alternative Deepwater Port Concepts	
		3.3.9 Alternative Technologies	
		3.3.10 Alternative Offshore Pipeline Routes	
		3.3.11 Alternative Pipeline Shoreline Crossing Technologies	
		3.3.12 Alternative Onshore Pipeline Locations	
	3.4	ALTERNATIVES EVALUATED IN CHAPTER 4.0	
	3.4	3.4.1 No Action Alternative	
		3.4.2 Alternative Deepwater Port, Subsea Pipeline, Shore	5-40
		Crossing, and Onshore Pipeline Location – Santa Barbara	
		Channel/Mandalay Shore Crossing/Gonzales Road Pipeline	
		Alternative	
		3.4.3 Shore Crossing Alternatives	
	2.5	3.4.4 Alternative Onshore Pipeline Routes	
	3.5	REFERENCES	3-53
4.0	ENIV/	IDONMENTAL ANALYSIS	444
4.0		IRONMENTAL ANALYSIS	
	4.1	INTRODUCTION TO ENVIRONMENTAL ANALYSIS	
		4.1.1 Baseline Conditions	
		4.1.2 Regulatory Framework	
		4.1.3 Significance Criteria	4.1-3
		4.1.4 Direct and Indirect Impact Analysis	4.1-3
		4.1.5 Applicant Measures and Mitigation Measures	4.1-5
		4.1.6 Evaluation of Alternatives	
		4.1.7 Underlying Assumptions	4.1-6
		4.1.8 Oceanography and Meteorology – Environmental Setting	4.1-6
		4.1.9 References	4.1-25
	4.2	PUBLIC SAFETY: HAZARDS AND RISK ANALYSIS	
		4.2.1 Overview	
		4.2.2 Representative Comments	4 2-3

	4.2.3	Independent Risk Assessment and Sandia National	
		Laboratories Review	
	4.2.4	Government Responsibilities for Public Safety	4.2-9
	4.2.5	Financial Responsibilities in the Event of an Accident	4.2-12
	4.2.6	Public Safety Risk Analysis Process	4.2-14
	4.2.7	FSRU and LNG Carriers	
	4.2.8	Natural Gas Pipelines	4.2-55
	4.2.9	Alternatives	
	4.2.10	References	
4.3	MARIN	E TRAFFIC	
	4.3.1	Environmental Setting	
	4.3.2	Regulatory Setting	
	4.3.3	Significance Criteria	
	4.3.4	Impact Analysis and Mitigation	
	4.3.5	Alternatives	
	4.3.6	References	
4.4		IETICS	
	4.4.1	Environmental Setting	
	4.4.2	Regulatory Setting	
	4.4.3	Significance Criteria	
	4.4.4	Impact Analysis and Mitigation	
	4.4.5	Alternatives	
	4.4.6	References	
4.5	_	ULTURE AND SOILS	
4.5	4.5.1	Environmental Setting	
	4.5.1	Regulatory Setting	
	4.5.3	Significance Criteria	
	4.5.3 4.5.4		
	4.5.4 4.5.5	Impact Analysis and Mitigation	
	4.5.5 4.5.6	Alternatives	
4.0		References	
4.6		JALITY	
	4.6.1	Environmental Setting	
	4.6.2	Regulatory Setting	
	4.6.3	Significance Criteria	
	4.6.4	Impact Analysis and Mitigation	
	4.6.5	Alternatives	_
	4.6.6	References	
4.7		GICAL RESOURCES - MARINE	
	4.7.1	Environmental Setting	
	4.7.2	Regulatory Setting	
	4.7.3	Significance Criteria	
	4.7.4	Impact Analysis and Mitigation	
	4.7.5	Alternatives	
	4.7.6	References	
4.8	BIOLO	GICAL RESOURCES – TERRESTRIAL	
	4.8.1	Environmental Setting	
	4.8.2	Regulatory Setting	
	4.8.3	Significance Criteria	
	4.8.4	Impact Analysis and Mitigation	
	4.8.5	Alternatives	
	4.8.6	References	4.8-75

4.9	CULTURAL RESOURCES	4.9-1
	4.9.1 Environmental Setting	4.9-1
	4.9.2 Regulatory Setting	
	4.9.3 Significance Criteria	
	4.9.4 Impact Analysis and Mitigation	
	4.9.5 Alternatives	
	4.9.6 References	
4.10	ENERGY AND MINERALS	
	4.10.1 Environmental Setting	4.10-2
	4.10.2 Regulatory Setting	4.10-10
	4.10.3 Significance Criteria	
	4.10.4 Impact Analysis and Mitigation	4.10-12
	4.10.5 Alternatives	
	4.10.6 References	4.10-15
4.11	GEOLOGIC RESOURCES AND HAZARDS	4.11-1
	4.11.1 Environmental Setting and Hazards	4.11-2
	4.11.2 Regulatory Setting	4.11-30
	4.11.3 Significance Criteria	4.11-30
	4.11.4 Impact Analysis and Mitigation	4.11-33
	4.11.5 Alternatives	4.11-42
	4.11.6 References	4.11-44
VOLUME II	LIA ZA DDOLIO MATERIALO	4.40.4
4.12	HAZARDOUS MATERIALS	
	4.12.1 Environmental Setting	
	3 3 3 3 3	
	4.12.3 Significance Criteria4.12.4 Impact Analysis and Mitigation	
	4.12.5 Alternatives	
	4.12.6 References	
4.13	LAND USE	
4.13	4.13.1 Environmental Setting	
	4.13.2 Regulatory Setting	
	4.13.3 Significance Criteria	
	4.13.4 Impact Analysis and Mitigation	
	4.13.5 Alternatives	
	4.13.6 References	
4.14	NOISE AND VIBRATION	
	4.14.1 Environmental Setting	
	4.14.2 Regulatory Setting	
	4.14.3 Significance Criteria	
	4.14.4 Impact Analysis and Mitigation	
	4.14.5 Alternatives	
	4.14.6 References	
4.15	RECREATION	4.15-1
	4.15.1 Environmental Setting	4.15-1
	4.15.2 Regulatory Setting	
	4.15.3 Significance Criteria	4.15-10
	4.15.4 Impact Analysis and Mitigation	4.15-12

		4.15.5 Alternatives	
		4.15.6 References	1.15-22
	4.16	SOCIOECONOMICS	.4.16-1
		4.16.1 Environmental Setting	.4.16-2
		4.16.2 Regulatory Setting	4.16-18
		4.16.3 Significance Criteria	
		4.16.4 Impact Analysis and Mitigation	
		4.16.5 Alternatives	
		4.16.6 References	
	4.17	TRANSPORTATION	
		4.17.1 Environmental Setting	
		4.17.2 Regulatory Setting	
		4.17.3 Significance Criteria	
		4.17.4 Impact Analysis and Mitigation	
		4.17.5 Alternatives	
		4.17.6 References	
	4.18	WATER QUALITY AND SEDIMENTS	4 18-1
	1.10	4.18.1 Environmental Setting	
		4.18.2 Regulatory Setting	
		4.18.3 Significance Criteria	
		4.18.4 Impact Analysis and Mitigation	
		4.18.5 Alternatives	
		4.18.6 References	
	4.19	ENVIRONMENTAL JUSTICE	
	4.13	4.19.1 Environmental Setting	
		4.19.2 Regulatory Setting	
		4.19.3 Analysis Criteria	
		4.19.4 Impact Analysis	
		4.19.5 Alternatives	
		4.19.6 References	
	4.20	CUMULATIVE IMPACTS ANALYSIS	
	4.20		
		,	
		,	
		I I	
		4.20.4 References	1.20-36
5.0	ОТЦЕ	ER REQUIRED NEPA/CEQA CONSIDERATIONS	E 1
5.0			3-1
	5.1	INTRODUCTION TO ADDITIONAL NEPA/CEQA REQUIREMENTS DISCUSSED IN THIS SECTION	- 4
	- 0		5-1
	5.2	ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT	
	5 0	THAT CANNOT BE MITIGATED TO LESS THAN SIGNIFICANT	5-1
	5.3	RELATIONSHIP BETWEEN SHORT-TERM USES AND LONG-	
	- 4	TERM PRODUCTIVITY	5-3
	5.4	IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF	
		RESOURCES	5-4
	5.5	GROWTH-INDUCING IMPACTS OF THE PROPOSED PROJECT	
	5.6	FLOODPLAIN MANAGEMENT EVALUATION	5-5
	00111	OLUGIONO AND DECOMMENDATIONS	
6.6		CLUSIONS AND RECOMMENDATIONS	
	6.1	RECOMMENDED MITIGATION AND MONITORING PROGRAM	
	6.2	ENVIRONMENTALLY SUPERIOR ALTERNATIVE	6-54

Table of Contents

	6.2.1	Comparison of Proposed Project and SB	
		Channel/Mandalay/Gonzales Road DWP Alternative	6-54
	6.2.2	Comparison of Proposed Project and Shore Crossing	
		Alternatives	6-54
	6.2.3	Comparison of Proposed Project and Alternative Onshore	
		Pipeline Route Alternatives	6-55
7.0	REPORT PR	EPARATION	7-1
	_	REPARERS AND REVIEWERS	
	72 FIR IN	FORMATION CONTACT	7-7

CABRILLO PORT LIQUEFIED NATURAL GAS DEEPWATER PORT REVISED DRAFT EIR LIST OF APPENDICES

Note: Asterisk indicates that the appendix can be found on the CD in the front pocket of Volume I.

APPENDIX A	DISTRIBUTION LIST
APPENDIX B	NOTICE OF PREPARATION
APPENDIX C1	INDEPENDENT RISK ASSESSMENT
APPENDIX C2	SANDIA REVIEW OF INDEPENDENT RISK ASSESSMENT
APPENDIX C3-1	CHRONOLOGICAL LIST OF LNG ACCIDENTS
APPENDIX C3-2	MARINE SAFETY AND SECURITY REQUIREMENTS
APPENDIX C3-3	DESIGN AND SAFETY STANDARDS APPLICABLE TO NATURAL GAS TRANSMISSION PIPELINES
APPENDIX D1	DRILLING FLUID RELEASE MONITORING PLAN FOR HDB
APPENDIX D2*	ANCHOR MITIGATION PLAN FOR HDB NEARSHORE PIPELINE PROJECT - MARINE OPERATIONS
APPENDIX D3*	HDB NEARSHORE PIPELINE PROJECT - MARINE OPERATIONS
APPENDIX D4	PRELIMINARY CONSTRUCTION PROCEDURE AND DESIGN FOR HDB PIPELINE LANDFALL
APPENDIX D5*	BALAST WATER SYSTEM OPERATIONS AND DESIGN FEATURES
APPENDIX E*	CALIFORNIA COASTAL COMMISSION LNG SITING STUDIES (EXCERPTS)
APPENDIX F	DISTANCE CALCULATIONS FOR AESTHETICS ANALYSIS
APPENDIX G1*	AIR QUALITY - CONSTRUCTION EMISSIONS
APPENDIX G2*	AIR QUALITY - OPERATING EMISSIONS
APPENDIX G3*	AIR QUALITY – FSRU STARTUP EMISSIONS
APPENDIX G4	AIR QUALITY – GENERAL CONFORMITY DETERMINATION [The General Conformity analysis is a separate process that is occurring independently of the EIR. The final analysis will be included in this location in the Cabrillo Port Final EIS/EIR]
APPENDIX G5*	AIR QUALITY – NITROGEN DIOXIDE, SULFUR DIOXIDE, CARBON MONOXIDE, AND PARTICULATE MATTER EMISSIONS

APPENDIX G6*	AIR QUALITY – HEALTH RISK ANALYSIS OF ONSHORE PIPELINE CONSTRUCTION
APPENDIX G7*	SIERRA RESEARCH CEQA AIR QUALITY ASSESSMENT
APPENDIX G8*	AIR QUALITY - AMMONIA EMMISSIONS
APPENDIX H1	ICHTHYOPLANKTON IMPACT ANALYSIS
APPENDIX H2	U.S. DEPARTMENT OF STATE BUREAU OF OCEANS AND INTERNATIONAL AND SCIENTIFIC AFFAIRS LETTER
APPENDIX I	SECTION 7 THREATENED AND ENDANGERED SPECIES AGENCY CONSULTATION
APPENDIX J1	USGS COMMENTS ON POTENTIAL GEOLOGIC AND SEISMIC HAZARDS AFFECTING THE VENTURA COUNTY COAST
APPENDIX J2*	PRELIMINARY SEISMIC AND GEOLOGIC HAZARDS EVALUATION
APPENDIX J3*	GEOLOGIC AND GEOTECHNICAL EVALUATION OF PROPOSED PIPELINE ROUTES
APPENDIX J4*	GEOTECHNICAL DESKTOP STUDY
APPENDIX K*	SUMMARY OF ENVIRONMENTAL DATA RESOURCES, INC.

March 2006

CABRILLO PORT LIQUEFIED NATURAL GAS DEEPWATER PORT REVISED DRAFT EIR LIST OF TABLES

<u>Table</u>		<u>Page</u>
TABLE ES-1	SUMMARY OF FSRU ACCIDENT CONSEQUENCES	ES-18
TABLE ES-2	MAJOR LAWS, REGULATORY REQUIREMENTS, AND PLANS FOR PUBLIC SAFETY REGARDING THE FSRU AND LNG CARRIERS ^A	ES-19
TABLE ES-3	MAJOR LAWS, REGULATORY REQUIREMENTS, AND PLANS FOR PUBLIC SAFETY REGARDING PIPELINES ^A	ES-23
TABLE ES-4	CATEGORIES OF IMPACTS	ES-44
TABLE ES-5	SUMMARY OF IMPACTS AND MITIGATION MEASURES	ES-45
TABLE 1.4-1	ISSUES RAISED IN COMMENTS ON OCTOBER 2004 DRAFT EIS/EIR – LOCATION OF DISCUSSION IN THIS DOCUMENT.	
TABLE 1.5.1	LIBRARIES OR OTHER PUBLICLY ACCESSIBLE REPOSITORIES FOR PROJECT EIS/EIR DOCUMENTS	1-32
TABLE 2.1-1	LOCATION OF PROJECT FACILITIES	2-6
TABLE 2.1-2	DISTANCES FROM FSRU TO POINTS OF INTEREST	2-9
TABLE 2.1-3	LAND AND SEA REQUIREMENTS FOR CONSTRUCTION AND OPERATION OF THE CABRILLO PORT PROJECT	2-10
TABLE 2.1-4	LAND REQUIREMENTS FOR TEMPORARY STAGING AREAS DURING CONSTRUCTION OF THE CABRILLO PORT PROJECT	
TABLE 2.3-1	OFFSHORE PIPELINE CHARACTERISTICS	2-40
TABLE 2.5-1	PIPELINE CONSTRUCTION VESSELS AND EQUIPMENT, USE, AND DURATION OF USE	2-52
TABLE 2.6-1	SEAFLOOR AREA IMPACTED BY HDB OPERATIONS	2-65
TABLE 3.2-1	COMPONENTS OF THE PROPOSED PROJECT AND	3-3

TABLE 3.3-1	SOUTHERN CALIFORNIA	3-8
TABLE 3.3-2	ESTIMATED REGASIFICATION RELATED AIR EMISSIONS OF EXCELERATE'S GULF GATEWAY PROJECT AND THE PROPOSED CABRILLO PORT PROJECT	J-28
TABLE 3.3-3	COMPARISON OF THE PROPOSED CABRILLO PORT FSRU TO AN ENERGY BRIDGE ALTERNATIVE	-29
TABLE 4.1-1	CATEGORIES OF IMPACTS4.	.1-4
TABLE 4.1-2	CHARACTERISTICS OF CURRENTS NEAR THE PROPOSED PROJECT4.1	-11
TABLE 4.1-3	APPLICANT-CALCULATED SIGNIFICANT WAVE HEIGHTS 4.1	-14
TABLE 4.1-4	NUMBERS OF DAYS PER YEAR IN WHICH WAVES EXCEED SPECIFIED HEIGHTS AT BUOYS LOCATED IN THE VICINITY OF THE PROPOSED SITE OF THE FSRU	-15
TABLE 4.1-5	SUMMARY OF METEOROLOGICAL OCEAN CONDITIONS AT BUOY 46025	-16
TABLE 4.1-6	VISIBILITY DISTANCES BY MONTH AT POINT MUGU 4.1	-21
TABLE 4.1-7	VISIBILITY FREQUENCY (PERCENT) AT POINT MUGU (PM) AND SAN NICHOLAS ISLAND (SNI)	-22
TABLE 4.2-1	SUMMARY OF FSRU ACCIDENT CONSEQUENCES4.	.2-2
TABLE 4.2-2	REPRESENTATIVE HAZARDS AND THREATS CONSIDERED IN THE PUBLIC SAFETY ANALYSIS4.	.2-5
TABLE 4.2-3	LEAD AND COOPERATING AGENCY AUTHORITY FOR THE PROJECT4.2	<u>?</u> -10
TABLE 4.2-4	COMPARISON OF TRANSPORTATION RISKS 4.2	:-17
TABLE 4.2-5	COMMON, APPROXIMATE THERMAL RADIATION DAMAGE LEVELS4.2	!-20
TABLE 4.2-6	MAJOR LAWS, REGULATORY REQUIREMENTS, AND PLANS FOR PUBLIC SAFETY REGARDING THE FSRU AND LNG CARRIERS4.2	·-26
TABLE 4.2-7	SUMMARY OF ISSUES AND RESOLUTIONS IDENTIFIED IN THE CABRILLO PORT IRA4.2	2-33

TABLE 4.2-8	SCENARIOS EVALUATED IN THE 2006 SANDIA REPORT AND THE IRA	. 4.2-36
TABLE 4.2-9	SUMMARY OF PUBLIC SAFETY IMPACTS AND MITIGATION MEASURES FOR THE FSRU AND THE DWP	
TABLE 4.2-10	NATURAL GAS TRANSMISSION PIPELINE INCIDENTS BY CAUSE	. 4.2-57
TABLE 4.2-11	SOCALGAS NATURAL GAS TRANSMISSION PIPELINE INCIDENTS REPORTED TO THE NATIONAL RESPONSE CENTER	. 4.2-59
TABLE 4.2-12	ANNUAL INCIDENT SUMMARIES – U.S. GAS TRANSMISSION PIPELINES	. 4.2-64
TABLE 4.2-13	ANNUAL TRANSPORTATION ACCIDENTAL DEATHS	. 4.2-65
TABLE 4.2-14	MAJOR LAWS, REGULATORY REQUIREMENTS, AND PLANS FOR PUBLIC SAFETY REGARDING PIPELINES	. 4.2-66
TABLE 4.2-15	PIPELINE LOCATION CLASS DEFINITIONS	. 4.2-69
TABLE 4.2-16	TRANSMISSION PIPELINE INCIDENT AND SAFETY- RELATED CONDITION REPORTING CRITERIA IN CALIFORNIA	. 4.2-71
TABLE 4.2-17	ESTIMATED ANNUAL INCIDENT FREQUENCIES/RISKS: GAS TRANSMISSION PIPELINES	. 4.2-74
TABLE 4.2-18	DESIGN GUIDELINES AND PROJECT-SPECIFIC VALVE SPACINGS	. 4.2-78
TABLE 4.2-19	PRELIMINARY IDENTIFICATION OF HIGH CONSEQUENCE AREAS (HCAS) ON PROJECT PIPELINE ROUTES	. 4.2-79
TABLE 4.2-20	SUMMARY OF PUBLIC SAFETY IMPACTS AND MITIGATION MEASURES FOR PROJECT PIPELINES	. 4.2-85
TABLE 4.3-1	AVERAGE VESSEL TRANSITS IN THE PROPOSED CABRILLO PORT PROJECT AREA	4.3-5
TABLE 4.3-2	PIPELINE CONSTRUCTION VESSELS AND EQUIPMENT, USE, AND DURATION OF USE	4.3-8
TABLE 4.3-3	ESTIMATED NUMBER OF WEEKLY AND ANNUAL TRANSITS TO THE FSRU	

TABLE 4.3-4	PLANS FOR MARINE TRAFFIC	. 4.3-23
TABLE 4.3-5	RISKS AND CONSEQUENCES OF SHIP COLLISIONS ESTIMATED BY APPLICANT	. 4.3-36
TABLE 4.3-6	COMMON, APPROXIMATE THERMAL RADIATION DAMAGE LEVELS	. 4.3-42
TABLE 4.3-7	DISTANCE TO LFL FROM DISPERSION OF VAPOR CLOUD	. 4.3-42
TABLE 4.3-8	POOL FIRE RESULTS	. 4.3-42
TABLE 4.3-9	FLASH FIRE RESULTS	. 4.3-43
TABLE 4.3-10	SUMMARY OF MARINE TRAFFIC IMPACTS AND MITIGATION MEASURES	. 4.3-47
TABLE 4.4-1	DISTANCES FROM RESIDENTIAL AREAS TO FSRU	4.4-5
TABLE 4.4-2	MAJOR LAWS, REGULATORY REQUIREMENTS, AND PLANS FOR AESTHETICS	. 4.4-15
TABLE 4.4-3	SUMMARY OF OFFSHORE LIGHTING REQUIREMENTS DURING OPERATION	. 4.4-25
TABLE 4.4-4	SUMMARY OF LIGHTING REQUIREMENTS DURING OFFSHORE CONSTRUCTION AND SHORE CROSSING	. 4.4-29
TABLE 4.4-5	SUMMARY OF AESTHETIC IMPACTS AND MITIGATION MEASURES	. 4.4-32
TABLE 4.5-1	REPRESENTATIVE AGRICULTURE ALONG THE PROPOSED CENTER ROAD PIPELINE ROUTES	
TABLE 4.5-2	SOIL TYPES ALONG THE CENTER ROAD PIPELINE ROUTES AND ACRES DISTURBED	4.5-3
TABLE 4.5-3	SOIL TYPES ALONG THE LINE 225 PIPELINE LOOP ROUTES AND ACRES DISTURBED	4.5-7
TABLE 4.5-4	MAJOR LAWS, REGULATORY REQUIREMENTS, AND PLANS FOR AGRICULTURE AND SOILS	. 4.5-13
TABLE 4.5-5	PRIME FARMLAND SOILS AND FARMLAND SOILS OF STATEWIDE IMPORTANCE TEMPORARILY DISTURBED AND/OR PERMANENTLY CONVERTED DURING CONSTRUCTION AND OPERATIONS	. 4.5-17

TABLE 4.5-6	APPROXIMATE NUMBER OF ORCHARD TREES THAT WOULD BE TEMPORARILY/PERMANENTLY REMOVED 4.5-19
TABLE 4.5-7	LENGTH OF TREE ROWS POTENTIALLY DISTURBED DURING PIPELINE INSTALLATION4.5-24
TABLE 4.5-8	REPRESENTATIVE AGRICULTURE PRESENT ALONG THE SANTA BARBARA CHANNEL/MANDALAY SHORE CROSSING/GONZALES ROAD PIPELINE
TABLE 4.5-9	SANTA BARBARA CHANNEL/MANDALAY SHORE CROSSING/GONZALES ROAD PIPELINE SOILS4.5-27
TABLE 4.5-10	SOIL ASSOCIATION – ARNOLD ROAD SHORE CROSSING/ARNOLD ROAD PIPELINE
TABLE 4.5-11	SOIL ASSOCIATION – POINT MUGU SHORE CROSSING/CASPER ROAD PIPELINE
TABLE 4.5-12	SUMMARY OF AGRICULTURE AND SOIL RESOURCES IMPACTS AND MITIGATION MEASURES
TABLE 4.6-1	SUMMARY OF NATIONAL AND STATE AMBIENT AIR QUALITY STANDARDS
TABLE 4.6-2	ATTAINMENT STATUS OF AREAS OF PROJECT ACTIVITY 4.6-6
TABLE 4.6-3	MOORING AND FSRU INSTALLATION EQUIPMENT 4.6-7
TABLE 4.6-4	OFFSHORE PIPELINE INSTALLATION EQUIPMENT4.6-7
TABLE 4.6-5	SHORE CROSSING CONSTRUCTION EQUIPMENT4.6-8
TABLE 4.6-6	ONSHORE PIPELINE INSTALLATION EQUIPMENT – TRENCHING
TABLE 4.6-7	ONSHORE PIPELINE INSTALLATION EQUIPMENT – PIPELAYING
TABLE 4.6-8	ONSHORE PIPELINE INSTALLATION EQUIPMENT – BORING4.6-11
TABLE 4.6-9	ONSHORE PIPELINE INSTALLATION EQUIPMENT – HORIZONTAL DIRECTIONAL DRILLING4.6-11
TABLE 4.6-10	DAILY AIR POLLUTANT EMISSIONS FROM PROJECT CONSTRUCTION ACTIVITIES4.6-12

TABLE 4.6-11	TOTAL AIR POLLUTANT EMISSIONS FROM PROJECT CONSTRUCTION ACTIVITIES	. 4.6-12
TABLE 4.6-12	AIR POLLUTANT POTENTIAL TO EMIT FROM FSRU EQUIPMENT	. 4.6-15
TABLE 4.6-13	AIR POLLUTANT EMISSIONS FROM PROJECT VESSELS – NORMAL OPERATIONS	. 4.6-16
TABLE 4.6-14	AIR POLLUTANT EMISSIONS FROM FSRU STATIONARY SOURCES DURING START-UP	. 4.6-17
TABLE 4.6-15	MAJOR LAWS, REGULATORY REQUIREMENTS, AND PLANS FOR AIR QUALITY	. 4.6-19
TABLE 4.6-16	SIGNIFICANCE THRESHOLDS FOR EMISSIONS IN VENTURA COUNTY AND LOS ANGELES COUNTY	. 4.6-25
TABLE 4.6-17	COMPARISON OF CO, NO _X , AND ROC CONSTRUCTION EMISSIONS WITH SIGNIFICANCE THRESHOLDS	. 4.6-26
TABLE 4.6-18	COMPARISON OF PM ₁₀ AND PM _{2.5} CONSTRUCTION EMISSIONS TO SCAQMD SIGNIFICANCE THRESHOLDS	. 4.6-28
TABLE 4.6-19	COMPARISON OF CONSTRUCTION EMISSIONS IN FEDERAL WATERS TO REGION-WIDE EMISSION FORECASTS	. 4.6-36
TABLE 4.6-20	SUMMARY OF AIR QUALITY IMPACTS AND MITIGATION MEASURES	. 4.6-39
TABLE 4.7-1	AVERAGE ABUNDANCE OF SPECIES (ORGANISMS PER SQUARE METER)	4.7-4
TABLE 4.7-2	FISH COMMON TO THE PROJECT VICINITY	4.7-7
TABLE 4.7-3	OCCURRENCE OF PROTECTED SPECIES OF CETACEANS IN OR NEAR THE PROJECT SITE	. 4.7-15
TABLE 4.7-4	OCCURRENCE OF PINNIPEDS IN OR NEAR THE PROJECT SITE	. 4.7-21
TABLE 4.7-5	OCCURRENCE OF THREATENED OR ENDANGERED SPECIES POTENTIALLY OCCURRING IN OR NEAR THE PROJECT SITE	. 4.7-22

TABLE 4.7-6	OCCURRENCE OF THREATENED AND ENDANGERED SPECIES OF SEA TURTLES IN OR NEAR THE PROJECT SITE	. 4.7-30
TABLE 4.7-7	MAJOR LAWS, REGULATORY REQUIREMENTS, AND PLANS FOR BIOLOGICAL RESOURCES – MARINE	. 4.7-32
TABLE 4.7-8	SEAWATER UPTAKE VOLUMES	. 4.7-48
TABLE 4.7-9.	SUMMARY OF VERTICAL DISTRIBUTIONS OF EFH SPECIES OCCURRING IN THE SOUTHERN CALIFORNIA BIGHT.	. 4.7-50
TABLE 4.7-10	FREQUENCY HEARING RANGES FOR SELECTED MARINE MAMMAL SPECIES	. 4.7-56
TABLE 4.7-11	NOISE GENERATED FROM OFFSHORE EQUIPMENT	. 4.7-60
TABLE 4.7-12	NOISE THRESHOLD LEVELS	. 4.7-61
TABLE 4.7-13.	TOTAL MAXIMUM COMBINED NOISE GENERATED FROM FSRU, LNG CARRIER, AND TUG BOATS AT FSRU	. 4.7-62
TABLE 4.7-14	SUMMARY OF MARINE BIOLOGY IMPACTS AND MITIGATION MEASURES	. 4.7-83
TABLE 4.8-1	VEGETATION COMMUNITIES ALONG THE CENTER ROAD PIPELINE AND ITS ALTERNATIVES	. 4.8-77
TABLE 4.8-2A	ACRES OF POTENTIAL JURISDICTIONAL WETLAND AND WATERS ALONG THE CENTER ROAD PIPELINE AND LINE 225 PIPELINE AND THEIR ALTERNATIVES	. 4.8-79
TABLE 4.8-2B	POTENTIAL JURISDICTIONAL WETLAND AND WATER SITES BY ALTERNATIVE	. 4.8-80
TABLE 4.8-3A	SPECIAL STATUS PLANT SPECIES POTENTIALLY OCCURRING IN THE VICINITY OF THE CENTER ROAD PIPELINE IN THE OXNARD PLAIN AND COASTAL ZONE	. 4.8-83
TABLE 4.8-3B	SPECIAL STATUS WILDLIFE SPECIES POTENTIALLY OCCURRING IN THE VICINITY OF THE CENTER ROAD PIPELINE IN THE OXNARD PLAIN AND COASTAL ZONE	. 4.8-85
TABLE 4.8-4	WINTERING BIRDS OBSERVED DURING THE WATERFOWL SURVEY ALONG THE CENTERLINE PIPELINE AND THE	

TABLE 4.8-5	SENSITIVE PLANT SPRING AND SUMMER 2005 SURVEY RESULTS ALONG THE CENTERLINE PIPELINE AND THE LINE 225 PIPELINE LOOP AND THEIR ALTERNATIVES 4.8-95
TABLE 4.8-6	TREE SPECIES AND LOCATIONS WITHIN THE PROPOSED CENTER ROAD PIPELINE AND ITS ALTERNATIVES 4.8-113
TABLE 4.8-7	VEGETATION COMMUNITIES ALONG THE LINE 225 PIPELINE LOOP AND ITS ALTERNATIVE
TABLE 4.8-8A	COAST LIVE OAK TREES ALONG THE LINE 225 PIPELINE LOOP
TABLE 4.8-8B	OAK TREES ALONG THE LINE 225 LOOP PIPELINE 4.8-120
TABLE 4.8-9A	SPECIAL STATUS PLANT SPECIES POTENTIALLY OCCURRING IN THE VICINITY OF THE LINE 225 PIPELINE LOOP
TABLE 4.8-9B	SPECIAL STATUS WILDLIFE SPECIES POTENTIALLY OCCURRING IN THE VICINITY OF THE LINE 225 PIPELINE LOOP
TABLE 4.8-10	MAJOR LAWS, REGULATORY REQUIREMENTS, AND PLANS FOR BIOLOGICAL RESOURCES – TERRESTRIAL 4.8-43
TABLE 4.8-11	SUMMARY OF TERRESTRIAL BIOLOGICAL RESOURCES IMPACTS AND MITIGATION MEASURES
TABLE 4.9-1	POSSIBLE SHIPWRECKS OFF VENTURA COUNTY AND VICINITY LISTED IN STATE AND FEDERAL DATABASES 4.9-7
TABLE 4.9-2	CULTURAL RESOURCE LOCATIONS AND FIELD VALIDATION OF SITES WITHIN THE 200-FOOT PROJECT RIGHT-OF-WAY4.9-12
TABLE 4.9-3	CULTURAL RESOURCE LOCATIONS OUTSIDE THE 200- FOOT PROJECT RIGHT-OF-WAY4.9-14
TABLE 4.9-4	MAJOR LAWS, REGULATORY REQUIREMENTS, AND PLANS FOR CULTURAL RESOURCES4.9-16
TABLE 4.9-5	SUMMARY OF CULTURAL RESOURCE IMPACTS AND MITIGATION MEASURES
TABLE 4.10-1	MAJOR LAWS, REGULATORY REQUIREMENTS, AND PLANS FOR ENERGY AND MINERALS

TABLE 4.10-2	SUMMARY OF ENERGY IMPACTS AND MITIGATION MEASURES4.	10-12
TABLE 4.11-1	ACTIVE AND POTENTIALLY ACTIVE FAULTS AND ASSOCIATED EARTHQUAKES GREATER THAN 4.5 MAGNITUDE WITHIN 25 MILES OF THE PROJECT SITE 4.	11-21
TABLE 4.11-2	RECORDED EARTHQUAKES GREATER THAN 5.5 MAGNITUDE WITHIN 25 MILES (40 KM) OF THE PROJECT OR LARGE QUAKES WITHIN ~80 MILES (129 KM), 1800 TO 1999	11-22
TABLE 4.11-3	MAJOR LAWS, REGULATORY REQUIREMENTS, AND PLANS FOR GEOLOGIC RESOURCES4.	11-31
TABLE 4.11-4	SUMMARY OF GEOLOGIC IMPACTS AND MITIGATION MEASURES	11-40
TABLE 4.12-1	INVENTORY OF ENVIRONMENTALLY REGULATED SITES WITHIN 0.25 MILE (0.4 KM) THE PROPOSED AND ALTERNATIVE ROUTES	l.12-4
TABLE 4.12-2	MAJOR LAWS, REGULATORY REQUIREMENTS, AND PLANS FOR HAZARDOUS MATERIALS4	1.12-6
TABLE 4.12-3	SUMMARY OF HAZARDOUS MATERIALS IMPACTS AND MITIGATION MEASURES4.	12-17
TABLE 4.13-1	CENTER ROAD PIPELINE EXISTING LAND USES4	.13-7
TABLE 4.13-2	SENSITIVE LAND USES IN THE VICINITY OF THE CENTER ROAD PIPELINE, VENTURA COUNTY4	l.13-8
TABLE 4.13-3	CENTER ROAD PIPELINE LAND USE DESIGNATIONS 4.	13-12
TABLE 4.13-4	LINE 225 PIPELINE LOOP EXISTING LAND USES4.	13-18
TABLE 4.13-5	LINE 225 PIPELINE LOOP LAND USE DESIGNATIONS 4.	13-21
TABLE 4.13-6	MAJOR LAWS, REGULATORY REQUIREMENTS, AND PLANS FOR LAND USE	13-26
TABLE 4.13-7	SUMMARY OF LAND USE IMPACTS AND MITIGATION MEASURES	13-35
TABLE 4.13-8	SANTA BARBARA CHANNEL/MANDALAY SHORE CROSSING/GONZALES ROAD PIPELINE ALTERNATIVE EXISTING LAND USES	13-37

TABLE 4.13-9	SANTA BARBARA CHANNEL/MANDALAY SHORE CROSSING/GONZALES ROAD PIPELINE ALTERNATIVE LAND USE DESIGNATIONS4.13-37
TABLE 4.13-10	CENTER ROAD PIPELINE ALTERNATIVE 1 EXISTING LAND USES
TABLE 4.13-11	CENTER ROAD PIPELINE ROUTE ALTERNATIVE 1 LAND USE DESIGNATIONS
TABLE 4.13-12	CENTER ROAD PIPELINE ALTERNATIVE 2 EXISTING LAND USES
TABLE 4.13-13	CENTER ROAD PIPELINE ALTERNATIVE 2 LAND USE DESIGNATIONS
TABLE 4.13-14	CENTER ROAD PIPELINE ALTERNATIVE 3 EXISTING LAND USES
TABLE 4.13-15	LINE 225 PIPELINE LOOP ALTERNATIVE EXISTING LAND USES
TABLE 4.14-1	TYPICAL NOISE LEVELS4.14-2
TABLE 4.14-2	MAJOR LAWS, REGULATORY REQUIREMENTS, AND PLANS FOR NOISE
TABLE 4.14-3	FSRU EQUIPMENT NOISE DURING OPERATION4.14-9
TABLE 4.14-4	CONSTRUCTION NOISE FROM HDB4.14-12
TABLE 4.14-5	ANTICIPATED NOISE REDUCTION FOR MITIGATION 4.14-15
TABLE 4.14-6	POTENTIAL VIBRATION IMPACT DISTANCES (IN FEET) 4.14-16
TABLE 4.14-7	CONSTRUCTION NOISE FROM TYPICAL PIPELINE CONSTRUCTION EQUIPMENT ACTIVITIES4.14-18
TABLE 4.14-8	SUMMARY OF NOISE IMPACTS AND MITIGATION MEASURES
TABLE 4.15-1	SPORTFISHING SPECIES COUNT IN VENTURA COUNTY 4.15-3
TABLE 4.15-2	WATER-ORIENTED RECREATIONAL ACTIVITY IN CHANNEL ISLANDS NATIONAL MARINE SANCTUARY 1999
	DAILY VISITORS AND OVERNIGHT CAMPERS AT CHANNEL

TABLE 4.15-4	PUBLIC PARKS, TRAILS, AND OTHER RECREATION FACILITIES WITHIN 1 MILE (1.6 KM) OF THE PROPOSED CENTER ROAD PIPELINE AND ITS ALTERNATIVES
TABLE 4.15-5	PUBLIC PARKS AND TRAILS WITHIN 1 MILE (1.6 KM) OF PROPOSED LINE 225 PIPELINE LOOP
TABLE 4.15-6	MAJOR LAWS, REGULATORY REQUIREMENTS, AND PLANS FOR RECREATION
TABLE 4.15-7	SUMMARY OF RECREATION IMPACTS AND MITIGATION MEASURES
TABLE 4.16-1	COMMERCIAL FISHING FLEETS IN AREA PORTS4.16-4
TABLE 4.16-2	COMMERCIAL FISHING LOCATION AND TIMING 4.16-4
TABLE 4.16-3	COMMERCIAL FISH LANDINGS BY PORT (VENTURA AREA) AND TOP COMMERCIAL VALUE OF FISH LANDINGS BY SPECIES – 2001
TABLE 4.16-4	ANNUAL PORT HUENEME-OXNARD-VENTURA FISH LANDINGS
TABLE 4.16-5	POPULATION AND POPULATION DENSITY IN THE VICINITY OF THE PROPOSED PROJECT
TABLE 4.16-6	POPULATION AND HOUSING ESTIMATES FOR VENTURA COUNTY
TABLE 4.16-7	VACANCY RATES IN THE VICINITY OF THE PROPOSED PROJECT4.16-10
TABLE 4.16-8	TEMPORARY ACCOMMODATIONS IN THE VICINITY OF THE PROPOSED PROJECT
TABLE 4.16-9	VENTURA COUNTY PARKS DEPARTMENT – TENT AND RV CAMPGROUNDS
TABLE 4.16-10	VENTURA COUNTY AVERAGE ANNUAL SALARIES, 1 ST QUARTER 20024.16-13
TABLE 4.16-11	VENTURA COUNTY EMPLOYMENT, 2003 4.16-13
TABLE 4.16-12	LOS ANGELES COUNTY EMPLOYMENT, 2003 4.16-14
TABLE 4.16-13	PUBLIC SERVICES SERVING THE PROPOSED PROJECT

TABLE 4.16-14	PROPOSED PROJECT AREA	. 4.16-16
TABLE 4.16-15	MAJOR LAWS, REGULATORY REQUIREMENTS, AND PLANS FOR SOCIOECONOMICS	. 4.16-19
TABLE 4.16-16	FISH CATCH LANDINGS AND REVENUE IN THE PROJECT AREA	. 4.16-21
TABLE 4.16-17	SUMMARY OF SOCIOECONOMIC IMPACTS AND MITIGATION MEASURES	. 4.16-26
TABLE 4.17-1	ROADWAYS USED TO ACCESS ORMOND BEACH SHORE CROSSING LOCATION AND TRAFFIC VOLUMES	4.17-2
TABLE 4.17-2	TRAFFIC DATA FOR ROADWAYS THAT CROSS OR PARALLEL THE PROPOSED CENTER ROAD PIPELINE ROUTE	4.17-5
TABLE 4.17-3	VENTURA COUNTY ROADS EXISTING LEVEL OF SERVICE	4.17-6
TABLE 4.17-4	TRAFFIC DATA FOR ROADWAYS THAT CROSS OR PARALLEL THE LINE 225 PIPELINE LOOP PROPOSED ROUTE	. 4.17-11
TABLE 4.17-5	MAJOR LAWS, REGULATORY REQUIREMENTS, AND PLANS FOR TRANSPORTATION	. 4.17-13
TABLE 4.17-6	ANTICIPATED CONSTRUCTION PERIODS ALONG 1-MILE SEGMENTS OF THE ONSHORE PROPOSED AND ALTERNATIVE PIPELINE ROUTES	. 4.17-16
TABLE 4.17-7	SUMMARY OF TRANSPORTATION IMPACTS AND MITIGATION MEASURES	. 4.17-27
TABLE 4.17-8	TRAFFIC DATA FOR ROADWAYS THAT CROSS OR PARALLEL CENTER ROAD PIPELINE ALTERNATIVE 1	. 4.17-30
TABLE 4.17-9	TRAFFIC DATA FOR ROADWAYS THAT CROSS OR PARALLEL CENTER ROAD PIPELINE ALTERNATIVE 2	. 4.17-32
TABLE 4.17-10	TRAFFIC DATA FOR ROADWAYS THAT CROSS OR PARALLEL THE LINE 225 PIPELINE LOOP ALTERNATIVE ROUTE	. 4.17-33
	MAJOR WATER QUALITY PARAMETERS OF THE OCEAN	<i>∆</i> 18 - 2

TABLE 4.18-2	SEDIMENT ANALYTICAL RESULTS – BHP BILLITON LNG INTERNATIONAL INC4.18-4
TABLE 4.18-3	SEDIMENT ANALYTICAL RESULTS – RELIANT ENERGY 4.18-6
TABLE 4.18-4	WATER QUALITY RESULTS – RELIANT ENERGY 4.18-6
TABLE 4.18-5	SURFACE WATER BODIES ALONG THE CENTER ROAD ROUTE AND ALTERNATIVES4.18-9
TABLE 4.18-6	SURFACE WATER BODIES ALONG THE LINE 225 PIPELINE LOOP
TABLE 4.18-7	CLEAN WATER ACT SECTION 303(D) LIST IMPAIRED WATER BODIES IN THE VICINITY OF THE CABRILLO PORT PROJECT (303D LIST APPROVED JULY 2003)
TABLE 4.18-8	MAJOR LAWS, REGULATORY REQUIREMENTS, AND PLANS FOR WATER QUALITY AND SEDIMENTS4.18-16
TABLE 4.18-9	SUMMARY OF WATER QUALITY AND SEDIMENTS MITIGATION MEASURES
TABLE 4.19-1	POPULATION BY ETHNIC AND RACIAL GROUPS – COUNTIES AND CITIES IN PROJECT AREA4.19-5
TABLE 4.19-2	SUMMARY OF HISPANIC OR LATINO POPULATION ALONG THE CENTER ROAD PIPELINE AND ALTERNATIVES4.19-6
TABLE 4.19-3	HISPANIC OR LATINO POPULATION ALONG THE CENTER ROAD PIPELINE PROPOSED ROUTE
TABLE 4.19-4	UNPOPULATED BLOCKS ALONG CENTER ROAD PIPELINE AND LOOP 225 PIPELINE ROUTES
TABLE 4.19-5	SUMMARY OF HISPANIC OR LATINO POPULATION WITHIN LINE 225 PIPELINE LOOP PROPOSED AND ALTERNATIVE ROUTES –
TABLE 4.19-6	INCOME DISTRIBUTION – COUNTIES AND CITIES IN THE PROJECT AREA COMPARED WITH THE STATE
TABLE 4.19-7	SUMMARY OF POPULATION BELOW POVERTY LEVEL NEAR CENTER ROAD PIPELINE AND ALTERNATIVES 4.19-12
TABLE 4.19-8	SUMMARY OF BELOW POVERTY LEVEL POPULATION OF PROPOSED LINE 225 PIPELINE LOOP PIPELINE AND ALTERNATIVE ROUTES

TABLE 4.19-9	PLANS FOR ENVIRONMENTAL JUSTICE	4.19-13
TABLE 4.19-10	SUMMARY OF ENVIRONMENTAL JUSTICE IMPACTS AND MITIGATION MEASURES	. 4.19-20
TABLE 4.20-1	SUMMARY OF PROPOSED AND CURRENT PROJECTS IN THE AREA OF THE APPLICANT'S PROPOSED PROJECT	4.20-2
TABLE 6.1-1	MITIGATION MONITORING PROGRAM	6-2
TABLE 6.2-1	COMPARISON MATRIX: PROPOSED OFFSHORE PROJECT COMPONENTS AND ALTERNATIVES	
TABLE 6.2-2	COMPARISON MATRIX: PROPOSED ONSHORE PROJECT COMPONENTS AND ALTERNATIVES	6-63
TABLE 6.2-3	COMPARISON MATRIX: PROPOSED SHORE CROSSING AND ALTERNATIVES	6-71
TABLE 7.1-1	AGENCY PROJECT TEAM	7-1
TABLE 7.1-2	PROJECT CONSULTANTS	7-2

CABRILLO PORT LIQUEFIED NATURAL GAS DEEPWATER PORT REVISED DRAFT EIR LIST OF FIGURES

<u>Figure</u>		<u>Page</u>
FIGURE ES-1	CONSEQUENCE DISTANCES SURROUNDING THE FSRU LOCATION FOR WORST CREDIBLE EVENTS	. ES-7
FIGURE ES-2	PROPOSED PROJECT COMPONENTS	. ES-9
FIGURE ES-3	LOCATION OF PROPOSED PROJECT AND ITS ALTERNATIVES	ES-11
FIGURE 1.0-1	PROPOSED CABRILLO PORT LNG DEEPWATER PORT	1-3
FIGURE 2.1-1	PROPOSED PROJECT COMPONENTS	2-3
FIGURE 2.1-2	CONSEQUENCE DISTANCES SURROUNDING THE FSRU LOCATION FOR WORST CREDIBLE EVENTS	2-7
FIGURE 2.2-1	PROPOSED FSRU PROFILE SCHEMATIC	2-17
FIGURE 2.2-2	ARTIST RENDERING OF FSRU	2-19
FIGURE 2.2-3	ARTIST RENDERING OF LNG CARRIER DOCKED AT FSRU DURING OFFLOADING	2-19
FIGURE 2.2-4	CROSS SECTION OF MOSS TANK	2-23
FIGURE 2.2-5	SUBMERGED COMBUSTION VAPORIZER PROCESS SCHEMATIC	2-25
FIGURE 2.4.1	CENTER ROAD PIPELINE: PROPOSED ROUTE	2-45
FIGURE 2.4-2	PROPOSED LINE 225 PIPELINE LOOP LOCATION	2-47
FIGURE 2.6-1	HORIZONTAL DIRECTIONAL BORING SCHEMATIC	2-55
FIGURE 2.6-2	TYPICAL ONSHORE HORIZONTAL DIRECTIONAL BORING EQUIPMENT LAYOUT	2-59
FIGURE 2.6-3	TYPICAL OFFSHORE HORIZONTAL DIRECTIONAL BORING EQUIPMENT LAYOUT	2-61

FIGURE 2.6-4	PROPOSED OFFSHORE HORIZONTAL DIRECTIONAL BORING VESSEL MOORING ARRANGEMENT	. 2-63
FIGURE 2.7-1	TYPICAL ONSHORE PIPELINE CONSTRUCTION SEQUENCE	. 2-71
FIGURE 3.3-1	CABRILLO PORT LIQUEFIED NATURAL GAS DEEPWATER PORT AND POTENTIAL ALTERNATIVES CONSIDERED	. 3-19
FIGURE 3.3-2	EXAMPLE OF AN ENERGY BRIDGE TERMINAL	. 3-27
FIGURE 3.3-3	REGIONAL TOPOGRAPHY	. 3-35
FIGURE 3.4-1	SHORE CROSSING ALTERNATIVES	. 3-45
FIGURE 3.4-2	CENTER ROAD PIPELINE: PROPOSED AND ALTERNATIVE ROUTES	. 3-47
FIGURE 3.4-3	LINE 225 LOOP PIPELINE: PROPOSED AND ALTERNATIVE ROUTES	. 3-51
FIGURE 4.1-1	NOAA AND CDIP BUOY LOCATIONS AND ANNUAL WIND ROSE (1982–2004) FOR NOAA BUOY 46025	4.1-9
FIGURE 4.1-2	NOAA WAVE CLIMATE SUMMARY PLOT FOR NOAA BUOY 46025	1.1-14
FIGURE 4.1-3	WIND SPEED AND DIRECTION (1982–2004) FOR NOAA BUOY 46025	1.1-19
FIGURE 4.1-4	INVERSION LAYERS	1.1-23
FIGURE 4.2-1	THE RISK ASSESSMENT PROCESS	1.2-15
FIGURE 4.2-2	PIPELINE INCIDENT, INJURY, AND FATALITY TRENDS 1986–2005	1.2-65
FIGURE 4.3-1	VESSEL TRAFFIC LANES IN THE VICINITY OF CABRILLO PORT	4.3-3
FIGURE 4.3-2	LNG CARRIER APPROACH ROUTES	4.3-9
FIGURE 4.3-3	PROPOSED ROUTES FOR SUPPORT VESSELS BETWEEN PORT CABRILLO AND PORT HUENEME	1.3-15
FIGURE 4.3-4	POTENTIAL SAFETY ZONE AND AREA TO BE AVOIDED (ATBA)	1.3-19

FIGURE 4.4-1	ARTIST'S RENDERING OF THE FSRU	4.4-2
FIGURE 4.4-2	OFFSHORE VIEW FROM OCEANVIEW DRIVE, PORT HUENEME (KOP 1)	4.4-5
FIGURE 4.4-3	OFFSHORE VIEW FROM THE MALIBU BLUFFS AREA (KOP 2)	4.4-6
FIGURE 4.4-4	SOUTHEASTERLY VIEW ALONG THE BEACH AT MANDALAY SHORES (KOP 3)	4.4-7
FIGURE 4.4-5	VIEW FROM ENCINAL CANYON ROAD, MALIBU (KOP 4)	4.4-8
FIGURE 4-4.6	VIEW FROM ANACAPA ISLAND (KOP 5)	4.4-9
FIGURE 4.4-7	VIEW LOOKING TOWARD THE CHANNEL ISLANDS FROM SR 1 NEAR THE LOS ANGELES/VENTURA COUNTY LINE (KOP 6)	4.4-10
FIGURE 4.4-8	VIEW TO THE ORMOND BEACH GENERATING STATION LOOKING SOUTHEAST ALONG THE COASTAL DUNES (KOP 7)	4.4-11
FIGURE 4.4-9	VIEW OF FARMLAND ADJACENT TO THE RELIANT ENERGY ORMOND BEACH GENERATING STATION, OXNARD (KOP 8)	4.4-12
FIGURE 4.4-10	VIEW OF DEL NORTE BOULEVARD, OXNARD (KOP 9)	4.4-13
FIGURE 4.4-11	VIEW OF VIA PRINCESSA ROAD AND CIRCLE J RANCH PARK, SANTA CLARITA (KOP 10)	4.4-14
FIGURE 4.4-12	VIEW OF SR 126, SANTA CLARITA (KOP 11)	4.4-15
FIGURE 4.4-13	SIMULATED VIEW OF FSRU FROM NEAR LEO CARRILLO STATE BEACH UNDER CLEAR WEATHER CONDITIONS	4.4-19
FIGURE 4.4-14	SIMULATED VIEW OF FSRU FROM NEAR LEO CARRILLO STATE BEACH UNDER TYPICAL MARINE WEATHER CONDITIONS	4.4-20
FIGURE 4.4-15	VIEW OF PROPOSED FSRU LOCATION FROM MALIBU BLUFFS, MALIBU (KOP 12)	4.4-21
FIGURE 4.4-16	VIEW OF PROPOSED FSRU LOCATION FROM POINT DUME UNDER CLEAR SKY CONDITIONS (KOP 13)	4.4-22

FIGURE 4.4-17	SIMULATED VIEW OF THE FSRU FROM POINT DUME UNDER TYPICAL MARINE CONDITIONS4.4-	23
FIGURE 4.4-18	SIMULATED NIGHTTIME VIEW OF THE FSRU NEAR THE HORIZON FROM A POINT NEAR LEO CARRILLO STATE BEACH4.4-	26
FIGURE 4.4-19	VIEW OF PLEASANT VALLEY ROAD, OXNARD (KOP 14) 4.4-	34
FIGURE 4.5-1	SOILS IN THE PROJECT VICINITY (VENTURA COUNTY) 4.5	; - 9
FIGURE 4.5-2	SOILS IN THE PROJECT VICINITY (LOS ANGELES COUNTY)4.5-	11
FIGURE 4.7-1	GRAY WHALE MIGRATION ROUTES 4.7-	19
FIGURE 4.8-1A	VEGETATION COMMUNITIES ALONG THE PROPOSED PROJECT PIPELINE AND ITS ALTERNATIVES, VENTURA COUNTY (MAP 1 OF 3)4.8	}-5
FIGURE 4.8-1B	VEGETATION COMMUNITIES ALONG THE PROPOSED PROJECT PIPELINE AND ITS ALTERNATIVES, VENTURA COUNTY (MAP 2 OF 3)	3-7
FIGURE 4.8-1C	VEGETATION COMMUNITIES ALONG THE PROPOSED PROJECT PIPELINE AND ITS ALTERNATIVES, VENTURA COUNTY (MAP 3 OF 3)	}-9
FIGURE 4.8-2	SENSITIVE VEGETATION COMMUNITIES ALONG THE PROPOSED PIPELINE AND ITS ALTERNATIVES, VENTURA COUNTY	11
FIGURE 4.8-3A	SPECIAL STATUS PLANT, WILDLIFE, AND NATURAL COMMUNITIES WITHIN A FIVE-MILE RADIUS OF THE PROPOSED PIPELINE AND ITS ALTERNATIVES, VENTURA COUNTY	15
FIGURE 4.8-3B	SPECIAL STATUS PLANT, WILDLIFE, AND NATURAL COMMUNITIES WITHIN A FIVE-MILE RADIUS OF THE SANTA BARBARA CHANNEL ALTERNATIVE/GONZALES ROAD PIPELINE, VENTURA COUNTY	17
FIGURE 4.8-4A	POTENTIAL LOCATIONS OF SUITABLE HABITAT FOR CALIFORNIA LEAST TERN, BELDING'S SAVANNAH SPARROW, AND WESTERN SNOWY PLOVER, VENTURA COUNTY4.8-:	21

FIGURE 4.8-4B	POTENTIAL LOCATIONS OF SUITABLE HABITAT FOR SALTMARSH BIRD'S BEAK4	.8-23
FIGURE 4.8-4C	POTENTIAL LOCATIONS OF SUITABLE HABITAT FOR WESTERN SNOWY PLOVER, CALIFORNIA LEAST TERN, BELDING'S SAVANNAH SPARROW, AND LEAST BELL'S VIREO, VENTURA COUNTY	.8-25
FIGURE 4.8-5	VEGETATION COMMUNITIES ALONG THE PROPOSED PIPELINE ROUTE AND ITS ALTERNATIVE, LOS ANGELES COUNTY4	.8-29
FIGURE 4.8-6	SENSITIVE VEGETATION COMMUNITIES ALONG THE PROPOSED PIPELINE ROUTE AND ITS ALTERNATIVE, LOS ANGELES COUNTY4	.8-31
FIGURE 4.8-7	SPECIAL STATUS PLANT, WILDLIFE, AND NATURAL COMMUNITIES WITHIN A FIVE-MILE RADIUS OF THE PIPELINE AND ITS ALTERNATIVE, LOS ANGELES COUNTY4	.8-35
FIGURE 4.8-8A	POTENTIAL LOCATIONS OF SUITABLE HABITAT FOR ARROYO TOAD, LEAST BELL'S VIREO, AND WESTERN SPADEFOOT TOAD IN THE PROJECT AREA, LOS ANGELES COUNTY4	.8-37
FIGURE 4.8-8B	POTENTIAL LOCATIONS OF SUITABLE HABITAT FOR THE COASTAL CALIFORNIA GNATCATCHER IN THE PROJECT AREA, LOS ANGELES COUNTY4	.8-39
FIGURE 4.11-1	BATHYMETRIC MAP OF PROJECT AREA4	.11-3
FIGURE 4.11-2	SEABED SLOPE GRADIENTS IN PROJECT AREA4	.11-7
FIGURE 4.11-3	OFFSHORE SURFICIAL GEOLOGY OF PROJECT AREA 4	.11-9
FIGURE 4.11-4	GEOLOGY (VENTURA COUNTY)4.1	1-11
FIGURE 4.11-5	GEOLOGY LOS ANGELES COUNTY4.1	1-13
FIGURE 4.11-6	LOCAL OFFSHORE GEOLOGY MAP4.1	1-15
FIGURE 4.11-7	GEOLOGICAL FAULTS AND EARTHQUAKE EPICENTERS IN THE PROJECT AREA, 1800 TO 19994.1	1-19
FIGURE 4.13-1	ORMOND BEACH WETLANDS RESTORATION PLAN AREA4	.13-5

FIGURE 4.13-2	SENSITIVE LAND USES IN THE PROJECT AREA, VENTURA COUNTY4.13-9
FIGURE 4.13-3	GENERAL PLAN AND ZONING DESIGNATIONS IN THE PROJECT AREA, VENTURA COUNTY4.13-13
FIGURE 4.13-4	SENSITIVE LAND USES IN THE PROJECT AREA, LOS ANGELES COUNTY
FIGURE 4.13-5	GENERAL PLAN AND ZONING DESIGNATIONS IN THE PROJECT AREA, LOS ANGELES COUNTY
FIGURE 4.16-1	CALIFORNIA DEPARTMENT OF FISH AND GAME CATCH BLOCKS IN THE PROJECT AREA
FIGURE 4.17-1	MAJOR ROAD INTERSECTIONS IN THE PROJECT AREA, VENTURA COUNTY
FIGURE 4.17-2	MAJOR ROAD INTERSECTIONS IN THE PROJECT AREA, LOS ANGELES COUNTY4.17-9
FIGURE 4.18-1	STREAMS, CANALS, AND AGRICULTURAL DITCHES IN THE PROJECT AREA, VENTURA COUNTY 4.18-11
FIGURE 4.18-2	STREAMS, CANALS, AND AGRICULTURAL DITCHES IN THE PROJECT AREA. LOS ANGELES COUNTY

CABRILLO PORT LIQUEFIED NATURAL GAS DEEPWATER PORT REVISED DRAFT EIR LIST OF ACRONYMS AND ABBREVIATIONS

AAAV Advanced Amphibious Assault Vessel
ACHP Advisory Council on Historic Preservation

ADT average daily traffic

AHTS anchor handling tug supply vessel
AIS Automatic Identification System
AM Applicant-proposed measure

APE Area of Potential Effect
ATBA area to be avoided

BACT best available control technology

bbl barrels

bcf billion cubic feet

BHPB BHP Billiton LNG International Inc.

BMPs best management practices

BRMIMP Biological Resources Mitigation Implementation and Monitoring Plan

Btu British thermal unit

Btu/dscf British thermal units per dry standard cubic feet

CAA Clean Air Act

CARB California Air Resources Board

Cal/COFI California Cooperative Fisheries Investigations
Cal/EPA California Environmental Protection Agency

CalOSHA California Occupational Safety and Health Agency

CalTrans California Department of Transportation

CBC California Building Code
CCA California Coastal Act

CCC California Coastal Commission
CCR California Code of Regulations

CDFG California Department of Fish and Game

CDIP Coastal Data Information Program

CDMG California Division of Mines and Geology
CDOC California Department of Conservation

CEC California Energy Commission
CEQ Council on Environmental Quality
CEQA California Environmental Quality Act

CERCLA Comprehensive Environmental Response, Compensation, and Liability

Act

CERCLIS Comprehensive Environmental Response, Compensation and Liability

Information System

CESA California Endangered Species Act

CFR Code of Federal Regulations
CGS California Geological Survey

CHNC California Harbors and Navigation Code
CINMS Channel Islands National Marine Sanctuary

CINP Channel Islands National Park

cm centimeter

cm/s centimeter per second

CNDD B California Natural Diversity Database

CNPS California Native Plant Society

CO carbon monoxide
CO₂ carbon dioxide
COPT Captain of the Port

CPUC California Public Utilities Commission
CSLC California State Lands Commission

CUP Conditional Use Permit

CURB City Urban Restriction Boundary

CWA Clean Water Act

CZMA Coastal Zone Management Act

dB decibel

dBA decibels on the A-weighted scale (human hearing frequency)

DHS United States Department of Homeland Security

DNV Det Norske Veritas

DOE U.S. Department of Energy

DPV dynamically positioned pipelaying vessel

DTSC California Department of Toxic Substances Control

DWP deepwater port
DWPA Deepwater Port Act
DWT deadweight tons

E & E Ecology & Environment, Inc.

EDCO Economic Development Corporation of Oxnard

EDR Environmental Data Resources, Inc.

EEAP Employee Environmental Awareness Program

EEZ Exclusive Economic Zone

EFH essential fish habitat

EIA U.S. Energy Information Administration

EIR environmental impact report environmental impact statement

EO Executive Order

ESA Endangered Species Act
ESU evolutionarily significant nit

FCC Federal Communications Commission

FDS Fire Dynamics Simulator

FEED Front End Engineering Design

FERC Federal Energy Regulatory Commission
FEMA Federal Emergency Management Agency
FERC Federal Energy Regulatory Commission
FMMP Farmland Mapping and Monitoring Program

FOSC Federal On-Scene Commander
FPPA Farmland Protection Policy Act

FPSO floating production, storage, and offloading

FR Federal Register

FSA formal safety analysis

FSRU floating storage and regasification unit

FTA Federal Transit Administration

g gravitational constant equal to 980.655 centimeters per second squared

GMDSS Global Marine Distress Safety System

GPS global positioning system

GREAT Ground Water Recharge Enhancement and Treatment

GT gross tonnage H₂S hydrogen sulfide

ha hectare

HARP Hotspots Analysis and Reporting Program

HAZID hazard identification and analysis
HAZOP hazard and operability study
HCA High Consequence Area
HDB horizontal directional boring
HDD horizontal directional drilling

 $\begin{array}{ll} \text{hp} & \text{horsepower} \\ \text{H}_{\text{s}} & \text{wave height} \end{array}$

HSWRI Hubbs-Sea World Research Institute

Hz hertz

IMO International Maritime Organization

INRMP Integrated Natural Resource Management Plan

IOU investor-owned utility

IRA Integrated Risk Assessment

ISM International Safety Management

ISO International Organization for Standardization
ISPS Code International Ship and Port Security Code
ISSC International Ship Security Certificate

JOFLO Joint Oil/Fisheries Committee of South/Central California

kHz kilohertz km kilometer

km² square kilometer

kW/m² kilowatts per square meter KOP key observation point LA/LB Los Angeles/Long Beach

LARWQCB Los Angeles Regional Water Quality Control Board

LCP Local Coastal Program

Ldn day-night sound level

Leq(h) equivalent sound level

LED light-emitting diode

LFL lower flammability limit

LHG liquefied hazardous gas

LNG liquefied natural gas

LOS level of service

LUST leaking underground storage tank

m meter

mg/L millgrams per liter
m/s meters per second
m² square meters
m³ cubic meters

m³/m cubic meters per minute

MAOP maximum allowable operating pressure

MARAD Maritime Administration

MARPOL International Convention for the Prevention of Pollution from Ships

MBTA Migratory Bird Treaty Act
mg/kg millgrams per kilogram
mg/L milligrams per liter
mg/mL millgrams per milliliter

mi² square miles mL milliliter

MM mitigation measure

MMBtu/hr million British thermal units per hour

MMcf million cubic feet

MMCfd million cubic feet per day
MMP mitigation monitoring program
MMPA Marine Mammals Protection Act

MMS U.S. Department of the Interior, Minerals Management Service

MMscfd million standard cubic feet per day

MOTEMS Marine Oil Terminal Engineering and Maintenance Standards

MP milepost

mph miles per hour

MRZ mineral resource zone
MSDS Material Safety Data Sheet

μPa micropascal MW megawatt

MWD Metropolitan Water District of Southern California

NAAQS National Ambient Air Quality Standards
NAHC Native American Heritage Commission

NBVC Naval Base Ventura County

NCP National Oil and Hazardous Substances Pollution Contingency Plan

NEPA National Environmental Protection Act

NH₃ ammonia

NHPA National Historic Preservation Act

NM nautical mile

NMFS National Marine Fisheries Service

NO₂ nitrogen dioxide

NOAA National Oceanic and Atmospheric Administration

NOI/NOP Notice of Intent/Notice of Preparation

NO_x nitrogen oxides

NPDES National Pollutant Discharge Elimination System

NPL National Priorities List NPS National Park Service

NRCS National Resources Conservation Service

NRMP Natural River Management Plan

OCS Outer Continental Shelf

OEHHA Cal/EPA Office of Environmental Health Hazard Assessment

OPA Oil Pollution Act of 1990

OSHA Occupational Safety and Health Act/Administration

OSPR California Department of Fish and Game Office of Oil Spill Prevention and

Response

OVTM Office of Vessel Traffic Management

OU Operable Unit

PAHs polynuclear aromatic hydrocarbons

PCBs polychlorinated biphenyls

PFMC Pacific Fishery Management Council

PG&E Pacific Gas and Electric Pga peak ground acceleration

PHMSA Pipeline and Hazardous Materials Safety Administration

PIR potential impact radius PLEM pipeline-ending manifold PLET pipeline end termination

 PM_{10} particulate matter less than 10 microns in diameter particulate matter less than 2.5 microns in diameter $PM_{2.5}$

POTW publicly owned treatment works

ppm parts per million ppt parts per thousand

PSD Prevention of Significant Deterioration

pounds per square inch psi

psig pounds per square inch gauge internal pressure

PTE potential to emit

QRA quantitative risk analysis

RCRA Resource Conservation and Recovery Act

RMS root mean square

ROCs reactive organic compounds

ROW right-of-way

RPT rapid phase transition

RWQCB Regional Water Quality Control Board

SB Senate Bill

SCADA supervisory control and data acquisition SCAQMD South Coast Air Quality Management District

SCAT South Coast Area Transit Bus Service SCCIC South Central Coast Information Center

SCE Southern California Edison SCR selective catalytic reduction

SCUBA self-contained underwater breathing apparatus **SCWRP** Southern California Wetlands Recovery Project

SEA significant ecological area

SEMS Standardized Emergency Management System

SES Sound Energy Solutions SHOBA shore bombardment range SIP State Implementation Plan

SO₂ sulfur dioxide

SOAR Save Our Agricultural Resources

SOAR Southern California Anti-Submarine Warfare Range

SOCAL Southern California Operations Area SoCalGas Southern California Gas Company

SOLAS International Convention for the Safety of Life at Sea

SOPEP Shipboard Oil Pollution Emergency Plan

SPCC Plan Spill Prevention, Control, and Countermeasures Plan

SR State Route

STCW Standards of Training, Certification and Watchkeeping

SVA security and vulnerability assessment
SWPPP Storm Water Pollution Prevention Plan

SWRCB California State Water Resources Control Board

SWTR Shallow Water Training Range

TAMMSA Terminals y Almacenes Maritimos de Mexico

TSDF treatment, storage, and disposal facility

TSS Traffic Separation Scheme

μg microgram

U.S.C. United States Code
UBC Uniform Building Code

USACE U.S. Army Corps of Engineers

USCG U.S. Coast Guard

USDOI
USDOT
USDOT
USEPA
U.S. Department of the Interior
U.S. Department of Transportation
USEPA
U.S. Environmental Protection Agency

USFWS U.S. Fish and Wildlife Service

USGS U.S. Geological Survey
UST underground storage tank

UV ultraviolet light

UXO unexploded ordnance

VCAPCD Ventura County Air Pollution Control District

VHF very high frequency

VOCs volatile organic compounds

VTS Vessel Traffic Service

WCOVTRMP West Coast Offshore Vessel Traffic Risk Management Project